

	Typ e	L #	Hits	Search Text	DBs	Time Stamp	Comm ents	Error Definiti on	Errors
8	BR S	L8	6017	heuristic	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:38			0
9	BR S	L9	65	8 and updat\$6 near2 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:14			0
10	BR S	L1 0	8	9 and (rebuild\$6 or re-build\$6) near2 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:13			0
11	BR S	L1 1	8	9 and (rebuild\$6 or re-build\$6 or restor\$6 or recovery) near2 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:29			0
12	BR S	L1 2	31	8 and updat\$6 near index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:36			0
13	BR S	L1 3	61	heuristic near9 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:28			0
14	BR S	L1 4	78	heuristic with index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:29			0
15	BR S	L1 5	7	14 and updat\$6 near index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:39			0
16	BR S	L1 6	3	15 and (rebuild\$6 or re-build\$6 or restor\$6 or recovery) near2 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-FED	2002/10/ 17 15:36			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
17	BR S	L1 7	877	8 and ("more" adj efficien\$6) and performance	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IM-TRP	2002/10/ 17 15:36			0
18	BR S	L1 8	11	17 and updat\$6 near index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IM-TRP	2002/10/ 17 15:36			0
19	BR S	L1 9	1	18 and (rebuild\$6 or re-build\$6 or restor\$6 or recovery) near2 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IM-TRP	2002/10/ 17 15:37			0
20	BR S	L2 0	45	heuristic near6 updat\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IM-TRP	2002/10/ 17 15:39			0
21	BR S	L2 1	2	20 and updat\$6 near index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IM-TRP	2002/10/ 17 15:39			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BR S	L1	56	(rebuild\$6 or re-build\$6 or re-built!) near2 index\$3	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:21			0
2	BR S	L2	14	1 and (b-tree or "binary tree")	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:30			0
3	BR S	L3	7	2 and updat\$6 near3 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:31			0
4	BR S	L4	5	3 and table and record	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:12			0
5	BR S	L5	3	4 and (height or size) near5 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:14			0
6	BR S	L6	18	1 and (height or size) near5 index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:15			0
7	BR S	L7	1	1 and (height or size) near5 (index\$6 near2 tree)	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:31			0
8	BR S	L8	12	1 and (index\$6 near tree)	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:17			0
9	BR S	L9	1	((rebuild\$6 or re-build\$6 or re-built!) near2 index\$3).ti.	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:22			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
10	BR S	L1 0	2	((rebuild\$6 or re-build\$6 or re-built!) with index\$3).ti.	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:23			0
11	BR S	L1 1	6	((rebuild\$6 or re-build\$6 or re-built!) near4 index\$3).ab.	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:25			0
12	BR S	L1 2	3	((rebuild\$6 or re-build\$6 or re-built!) adj index\$3).clm.	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:27			0
13	BR S	L1 3	25	((rebuild\$6 or re-build\$6 or re-built! or restor\$6 or recover\$6) near2 index\$3).ti.	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:27			0
14	BR S	L1 4	135	((rebuild\$6 or re-build\$6 or re-built! or restor\$6 or recover\$6) near2 index\$3).ab.	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:37			0
15	BR S	L1 5	59	((rebuild\$6 or re-build\$6 or re-built! or restor\$6 or recover\$6) near2 index\$3).clm.	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:28			0
16	BR S	L1 7	1	16 and 15	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:28			0
17	BR S	L1 6	7	13 and 14	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:29			0
18	BR S	L1 8	3	13 and 707/\$.ccls.	USPAT; US-PGPUB ; EPO; JPO; DERWENT;	2002/10/17 09:30			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
19	BR S	L1 9	3	14 and 707/\$.ccls.	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:30			0
20	BR S	L2 0	7	15 and 707/\$.ccls.	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:30			0
21	BR S	L2 1	1	20 and (b-tree or "binary tree")	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:36			0
22	BR S	L2 2	677	(b-tree or "binary tree") same index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:38			0
23	BR S	L2 3	105	22 and updat\$6 near index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:38			0
24	BR S	L2 4	2	23 and (height or size) near5 (index\$6 near2 tree)	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:32			0
25	BR S	L2 5	2	14 and (b-tree or "binary tree")	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:37			0
26	BR S	L2 7	365	((rebuild\$6 or re-build\$6 or re-built! or restor\$6 or recover\$6) near index\$3)	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:37			0
27	BR S	L2 8	23	27 and (b-tree or "binary tree")	USPAT; US-PGPUB ; EPO; JPO; DERWENT; IBM TRS	2002/10/ 17 09:38			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
28	BR S	L2 9	22	28 and (b-tree or "binary tree") same index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:38			0
29	BR S	L3 0	9	29 and updat\$6 near index\$6	USPAT; US-PGPUB ; EPO; JPO; DERWENT; USM-TSP	2002/10/ 17 09:38			0

US-PAT-NO: 5574897

DOCUMENT-IDENTIFIER: US 5574897 A

TITLE: System managed logging of objects to speed recovery processing

DATE-ISSUED: November 12, 1996

US-CL-CURRENT: 707/1; 712/220

APPL-NO: 07/ 954641

DATE FILED: September 30, 1992

----- KWIC -----

Brief Summary Text - BSTX:

When the system terminates abnormally, e.g. a power failure, the tables and the related indexes might not be synchronized. Some transactions may have caused index(es) to be updated, but the associated rows may not have been updated on non-volatile storage at the time the system terminated, or vice versa.

Recovery processing after an abnormal system termination can thus include reading every row in every table, and **rebuilding each of the indexes** from the table rows. Depending on the number, size, and complexity of the database objects that are open when the system terminates, this recovery processing may take hours or even longer, during which time these objects may not be available to the user. This lengthy unavailability may be unacceptable to many users.

Brief Summary Text - BSTX:

For those users who must have high system availability and cannot afford long recovery times following abnormal system termination, the fixed recovery time environment is provided. Under this environment, the user chooses a length of time (external **threshold**) that he is willing to spend recovering the data base, and the system dynamically manages the logging of objects to meet this time. The shorter the time he chooses, the more objects the system will log, and the more performance degradation there will be as a result of the logging at run-time.

Brief Summary Text - BSTX:

The user may partition his storage into Auxiliary Storage Pools (ASPs), which are groups of non-volatile storage, and then specify the recovery time (ASP specific external **threshold**) on a per ASP basis. This allows the user to assign applications to a particular ASP and thus control the amount of time spent recovering a particular application, so that the data for a critical application can have a short recovery time while the recovery for non-critical